

ER Site No. 59: Pendulum Site

ADS: 1333

Operable Unit: Canyons Test Area

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Primary Contact: [Dick Fate](#)

Office Phone: 284-2568

Site History

The Pendulum Site is located on Pendulum Road, east of Manzano Base and just west of the US Forest Service withdrawn lands. It was used for studying the effects of acceleration forces on weapons components in the early 1950's before Sandia National Laboratories had a centrifuge. The purpose of the Pendulum Site was to measure the structural response of a weapon, such as a warhead as it underwent the forces of instantaneous acceleration during firing. A pendulum-type framework was erected to suspend simulated weapons over a concrete lined trench. Small bazooka rockets were attached to the pendulum and ignited to impart instantaneous acceleration on the test weapon (simulate firing). The structural response of the weapon to these forces was then measured. The pendulum was used to dissipate the energy imposed on the weapon by allowing it to swing freely. These experiments were nondestructive.

Photographs of the facility during its operation show a tall wooden fence (estimated height, 10 to 15 feet) surrounding the trench. Today, the site consists primarily of the concrete-lined trench (80-feet by 15-feet by 4-feet deep) surrounded by a barbed wire fence about 120-feet long (N-S) by 60 feet wide (E-W) where the tests were performed. According to the CEARP Information sheet and interviews compiled on 5/23/93, the weapon shock testing used instrumentation installed in the test units, and no hazardous materials were released to the environment other than gases from the bazooka rockets. There was no destruction of the test units in these experiments. According to the CEARP notes from October 24, 1985, there was considerable debris around the site but no hazardous materials were positively identified. From the available photographs, the debris appears to be material from the dismantled pendulum. The debris was removed from the site some time between the mid 1980's and 1992.

The site is easily accessible by an unimproved road and is located near a major arroyo tributary which flows to the south. The local geology consists of thin alluvial material overlying metamorphic and igneous bedrock.

Constituents of Concern

None

Current Hazards

There are no current hazards at this site related to contamination of the surface or subsurface soils. There are structures that remain at the site that are a potential hazard.

Current Status of Work

Operable Unit 1333 RFI Work Plan was submitted to the Environmental Protection Agency (EPA) for approval in January 1996.

A No Further Action (NFA) proposal was submitted to EPA in September 1995. The New Mexico Environment Department (NMED) accepted Site 59 for NFA in June 1999. The NFA was approved by NMED in July 2000 after completing the public review and permit modification process.

Future Work Planned

No further work is planned.

Waste Volume Estimated/Generated

To date, there has been no waste generated at this site.

Information for ER Site 59 was last updated Jan 22, 2003.